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AN  
INAUGURAL ESSAY  
ON THE  
*INFLUENCE OF MUSIC*  
IN THE CURE OF  
DISEASES.

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BY EDWIN A. ATLEE,

*OF PENNSYLVANIA.*

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“ There is a charm, a pow’r that sways the breast,  
“ Bids every passion revel....or be still ;  
“ Inspires with rage, or all our cares dissolves,  
“ Can sooth distraction, and almost despair :.....  
“ That power is Music.”

ARMSTRONG.

21368

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AN  
INAUGURAL ESSAY

ON THE  
*INFLUENCE OF MUSIC*  
IN THE CURE OF  
DISEASES.

SUBMITTED TO THE EXAMINATION OF  
THE REV. JOHN ANDREWS, PROVOST PRO TEMPORE,

THE  
TRUSTEES AND MEDICAL PROFESSORS  
OF

*THE UNIVERSITY OF PENNSYLVANIA;*  
AND DEFENDED BEFORE THEM ON THE  
FIFTH OF JUNE, 1804,

FOR THE DEGREE OF  
DOCTOR OF MEDICINE.



## DEDICATION.

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*TO BENJAMIN SMITH BARTON, M. D.*

PROFESSOR OF BOTANY, NATURAL HISTORY, AND THE MATERIA  
MEDICA, IN THE UNIVERSITY OF PENNSYLVANIA.

SIR,

TO whom can I with more propriety dedicate this Dissertation, than to you, under whose auspices, subsequent to the death of my former worthy preceptor, Dr. Edward Hand, I finished my medical studies !

In dedicating this trifle to you, my only motive is, to acknowledge the gratitude I feel for the many instances of disinterested friendship and generosity, evinced to me while your pupil ; and to express the warmest wishes for your continuance in eminence and prosperity, until you have arrived at the summit of your deserts.

With sentiments of unfeigned regard,

I am, Dear Sir,

Your obliged friend

And very humble servant,

EDWIN A. ATLEE.

qui questione di diritti umani ha fatto molto.<sup>107</sup> La  
costituzionalità di questo decreto fu sollevata dallo Stato della C.<sup>108</sup> in un'indagine che le autorità giudicarono non merita di essere presa in esame, mentre la commissione della Corte  
di costituzionalità ritenne che il decreto era in linea con  
le norme costituzionali. La Corte costituzionale del Pakistan  
ha deciso molti quesiti riguardanti i diritti umani, ma questi  
si sono riferiti alle circostanze specifiche del paese. Non  
è stato possibile trovare nulla che sia di qualche  
utilità per l'analisi dei problemi che si presentano in  
questo caso. Tuttavia, si possono fare alcune considerazioni  
che potrebbero essere di qualche aiuto.

La prima è che la legge sulle minoranze musulmane, approvata  
nel maggio scorso, consente alle persone appartenenti a  
qualsiasi gruppo etnico o religioso di vivere in qualsiasi  
parte del paese senza essere costretti a vivere nei quartieri  
dei musulmani. Questa legge è stata approvata dal Consiglio  
costituzionale del Pakistan, che ha deciso che questa legge  
non viola i diritti umani. La legge sulla discriminazione  
riconosce le minoranze come gruppi etnici e religiosi, ma non  
ha fatto nulla per proteggere i diritti umani. La legge  
sulla discriminazione riconosce i diritti umani, ma non  
ha fatto nulla per proteggere i diritti umani.

SANTINI 202

## PREFACE.

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THE rules of the institution make it necessary that a candidate for medical honours shall compose a dissertation on some subject connected with Medicine, as a test of his abilities ; of course, however inadequate I may be to the task, I must submit.

Theses, in general, are but extracts from such authors as are put into the hands of students, drest in a somewhat different garb, and ornamented by modern improvement in language....little new can now be thought of.

I have, however, chosen a subject for my inaugural dissertation, which, I am well aware, will excite the risibility of many, and the just censure of a few ; but though, in thus publishing my opinion to the world, I make known my own failings, I must beg leave to say, that its *originality* entitles it to some degree of notice, and that future investigation of the subject will, no doubt, give it that place in the Materia Medica which it merits. I therefore resign it to its fate.

THE AUTHOR.



## DISSERTATION.

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THE intimate connection which subsists between the human body and mind, is so evident, that an attempt at its demonstration would be the height of absurdity.

This connection, we justly believe, is preserved through the medium of the brain, and nerves distributed from it, to every, even the most minute part of the complex system of man.

All sensible impressions made on the body, are conveyed to the sensorium by the nerves, and cause therein sensation ; the sensorium then, by a power which I shall not attempt to explain, is enabled to react upon these nerves, and, by this reaction, to produce motion : For example ; in the organs of vision, light, when it affects the retina of the eye, causes it to act on the sensorium, and the reaction of the sensorium produces a motion of the retina, so as to convey a complete idea of the object from which the rays are reflected or emitted ; and, in like manner, are the organs of hearing affected by sound, communicated through the medium of atmospheric air to the tympanum.

My design is to treat of the effects produced on the mind by the impression of that certain modification of sound called *Music*, which I hope to prove has a powerful influence upon the mind, and consequently on the body.

Music is the art of combining sounds in a manner agreeable to the ear; and may be divided into melody and harmony.

By melody is meant, that succession of sound so regulated as to produce pleasing airs.

Harmony is the uniting to each of the sounds in regular succession, two or more different sounds, which, simultaneously striking the ear, sooth it by their concurrence.

Music is also, according to Rousseau, divisible into,

1. Physical, which is limited to mere mechanical sounds, and reaches no further than the external senses, without impressing the heart, and produces nothing but corporeal sensations more or less agreeable.

2. Imitative, which by lively and accentuated inflections, and by sounds which may be said to *speak*, expresses all the passions, paints every possible picture, reflects every object, subjects the whole of nature to its

skilful imitations, and imposes on the heart and soul of man, sentiments proper to affect them in the most sensible manner.

It is from this latter species of music that physicians may expect to derive benefit in the healing art, and from this that effects almost incredible have from the earliest ages been produced.

There appears to be a connection in nature established by our Creator, between sounds, and the objects which they are made to represent ; and on this account it is probable that music was one of those arts which were first discovered. It was a custom among the earliest nations, as ancient writings, both sacred and profane teach us, publicly to sing to the sound of instruments, all their laws, human and divine, their exhortations to virtue, the characters and actions of their gods and heroes, and the lives of their illustrious men ; and this most probably was not the consequence of any premeditated plan, but as it were by the inspiration of the Deity.

Many accounts of the fascinating power of music have been handed down to us from ancient times, al-

though they are very imperfect, owing, no doubt, to the difficulty of conveying adequate ideas of sound by means of words ; but certain it is, that in every age, its power has been felt and acknowledged.

The passions of the mind are peculiarly affected by music. Indeed there is scarce an emotion that may not be excited or suppressed by it. It may not, therefore, be foreign to my subject to make a few remarks on the influence of these passions upon the body, or at least such of them as are more particularly subject to its power.

The first which I shall notice is joy. This is a violent, but pleasing passion, or emotion of the mind, arising from the sudden attainment of any good, or abstraction of any evil.

From its peculiarly stimulating effects, the nervous influence is determined into the system in an unusual degree, and accelerates the circulation of the blood. The heart, breast, and face feel a pleasing warmth ; so great indeed is its impression, that the heart is sometimes convulsed with transport : nay, instances have been recorded, of excessive joy producing instant death. This was remarkably exemplified in the case mentioned by

our worthy Professor of Institutes, of an aged door-keeper to Congress, during the late American war, who, upon hearing of the capture of Lord Cornwallis, was so overpowered with joy, that he instantly expired.

This passion, however, when not excessive, greatly promotes the circulation of the blood, together with the different secretions and other functions of the body.

The stimulating passion of joy is excited in a very remarkable degree by music, as must be evident even to the most superficial observer, and I presume that it has been experienced, in some degree at least, by every one. In some instances I have seen its effects so violent, even in children, as to border upon madness.

I shall now mention the passion of grief, or that emotion of the mind which is caused by the loss of, or disappointment in any good. Its effects are directly opposite to those of joy; but nevertheless it may, when of long duration, or sudden and violent, induce death. That species of grief which is called despair, frequently occasions dyspepsia, hysteria, hypochondriasis and melancholy. The different secretions by reason of the irregular determinations of the circulation, become viti-

ated, considerably lessened, and sometimes even suppressed.

Grief may also be excited by music, the effects of which, upon the system, as opposite to those of joy, will be of a sedative nature.

The various degrees or modifications of joy and grief seem to constitute those emotions which can be excited by music, unless we admit anger, which might be excited by sounds disagreeable to the patient, and continued for some time,

Having now considered the passions as they affect the body, and endeavoured in a brief manner, to shew the influence of music upon them, it rests with me to attempt the application of it in the practice of medicine.

This attempt, I must own, will be made almost solely from theory; for the subject, however greatly deserving of attention and thorough investigation, has unfortunately been too much neglected, and I feel no hesitation in acknowledging, that my remarks will necessarily want that stability, which facts and experiment can alone afford. The consciousness also of my own

inexperience, and diffidence in my weak abilities for the purpose, almost check my further progress.

But, on the contrary, the recollection, that even one attempt towards palliating or relieving the miseries of our fellow creatures, however *futile* it may be considered by that class of men, improperly called *critics*, will still, in the opinion of the *wiser* and more *benevolent*, be not only pardonable, but probably commendable ; I say this recollection, together with a conviction of the duty I owe to mankind and to myself, encourage and urge me to persist.

I shall therefore, in noticing those diseases over which music has controul, be very concise, and perhaps shall not adopt any regular nosological plan, but merely confine myself to a few which seem to me most likely to be relieved by it.

It has long been my belief that, in the different states of mania, this remedy judiciously exhibited, would be attended with the happiest effects ; for I am much inclined to think, that music is to the mind, what opium is to the body, A DIVINE MEDICINE, and as extensively applicable in the diseases of the one, as this article of the Materia Medica, emphatically stiled

"Magnum Dei Donum," has been found to be in the other.

Mania may be defined "that diseased state of the mind, in which a peculiar idea, either of desire or aversion perpetually exists." It is sometimes connected with pleasurable ideas without the exertion of much muscular action: at other times, and in certain constitutions, it produces violent muscular action to gain or avoid the object of it; in others it is attended with despair and inaction. This last species may be called Melancholy.

The idea, which induces madness or melancholy is generally, according to Darwin, untrue; that is, the object is a mistaken fact, and therefore cannot be conquered by reason, because the stimulus of painful sensation is stronger than volition. It also not unfrequently happens that medicines employed in general practice, with a view to cure, are found ineffectual, owing to the difficulty of ascertaining the cause.

When the malady arises from bodily pain, or is the consequence of fever, it is true much can be done, and with considerable certainty of success: but when it is the consequence of a delirious or mistaken idea, inde-

pendent of any febrile affection of the body, there is reason to suppose that the cure is doubtful, and indeed sometimes impracticable.

Now in maniacal diseases of the latter description, it would seem that music might be very happily employed as a remedy, and this, for the following reasons :

1. Because it can be applied in almost every possible degree of force.
2. Because its effects are like electricity and galvanism, instantaneous and universal.
3. Because it possesses a power peculiar to itself, of suspending the idea which is the cause of the insanity, and thereby inducing forgetfulness of the object. And it is generally believed that oblivion is as effectual a remedy for mental diseases as any other hitherto experienced.

I might here, if time would permit, or if it were essential to the elucidation of my subject, enumerate the various instances of the exhilarating power of music, in the most laborious and dangerous occupations of life, such as, the war-breathing *Trumpet*, the spirit-stirring

*Drum*, and even the sailor's simple *To, heave, oh!* But I will pass these over, as facts familiar to us all, and content myself with the relation of a few instances which have come under my own notice, wherein the ideas occasioning the insanity were suspended in a remarkable manner by this medicine.

A lady of my acquaintance, who was subject to melancholy, used frequently to relieve her mind by listening to the rude notes of my violin, while amusing myself after the occupations of the day.....One tune in particular, of which she had been fond from her childhood, used to affect her very sensibly. This was “The topsail shivers in the wind.” I never played it, but, by a kind of pleasing association of ideas, it rendered her cheerful and happy, not only during the time of the performance, but for a considerable time afterwards. Indeed she used frequently, while I lodged in her house, to recur to this favourite tune for relief, as many do to opium, in habitual complaints requiring the use of that medicine, and always with similar good effects.

A young lady, of delicate health, and acute feelings, who was subject to depression of spirits, or hysteria, used frequently to relieve her mind by playing on her

piano an exhilarating air....The effect was instantaneous, and fully adequate to the purpose.

Not many months ago, I had an opportunity of witnessing the effect of music in suspending mania, on a young man who unfortunately laboured under it. He had, previously to his mental derangement, been fond of amusing himself with his flute; and while in that state of active insanity, I thought of trying the effect of my medicine on him. I recollect some of his favourite airs, and persuaded him to play them for me. It was with great pleasure I observed that these tunes immediately composed him; they brought to his remembrance many objects of a pleasing nature, the ideas of which were associated with these tunes, and for a while entirely suspended the maniacal ideas which had taken possession of his mind.

These facts tend much to corroborate the opinions which I have advanced respecting the influence of music in primary affections of the mind; I will now beg leave to recommend it in diseases of the body.

In fevers, for instance, of great arterial action, attended with morbid excitement in the brain, inducing mania, it is very probable that music may act in a way

similar to the lancet, to wit, by lessening the morbid action, and equalizing the excitement and excitability of the system, provided it be of the soft, plaintive kind.

On the contrary, in diseases of debility, we may suppose that lively sounds would afford a healthful stimulus to the body, invigorating it as a cordial, or tonic medicine.

Were I to recommend any particular national music, I should prefer the Scottish, which appears to me the most expressive, whether of the plaintive or festive nature. Many of the Italian airs also possess virtues, which, under the direction of a judicious, philosophical musician, may without doubt be employed to advantage.

In fine, I believe that music ought justly to be esteemed as one of the most agreeable, powerful, and effectual means of relieving human misery, and have to regret that my former habits of observation, and my present engagements, have, and continue to prevent, a proper application to this important subject. But I cannot help expressing a sincere and anxious de-

sire, that some favoured genius, in this enlightened æra of medical science, may rescue from its half extinguished embers this

“ Spark of Heav’n’s own fire,” which  
 .....exalts each joy, allays each grief,  
 “ Expels diseases.....softens every pain,  
 “ Subdues the rage of poison, and the plague,  
 “ And hence the wise of ancient days ador’d  
 “ One pow’r of PHYSIC, MELODY and SONG.”

FINIS.



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